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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/750,481	12/31/2003	Mark McDonald	30320/15126	9859
4743	7590	11/28/2005	EXAMINER	
MARSHALL, GERSTEIN & BORUN LLP 233 S. WACKER DRIVE, SUITE 6300 SEARS TOWER CHICAGO, IL 60606			UNELUS, ERNEST	
			ART UNIT	PAPER NUMBER
			2828	

DATE MAILED: 11/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/750,481	<b>Applicant(s)</b> MCDONALD, MARK	
	<b>Examiner</b> Ernest Unelus	<b>Art Unit</b> 2828	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on 31 December 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>06/01/05, 06/01/04</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 2, 6-15, and 17 are rejected under 35 U.S.C. 102(e) as being anticipated by McDonald et al. (US pub. 2002/0172239).

With respect to claims 1, and 6, McDonald discloses two angular tuning filters (24 and 26), which are etalon elements having multiple angle sensitivities to the reference axis (22) to the light (see paragraphs 0041, 0042, and 0088) (see fig. 1).

With respect to claims 2, and 11, since McDonald discloses two angular tuning filters, (see paragraphs 0041, 0042, and 0088) (see fig. 1), it is an inherent feature for the first and second angular sensitivity to cancel, equal, or offset each other.

With respect to claim 7, McDonald discloses that the tunable filter element (24) comprises a first resistive element (36) for heating the tunable filter element, (see paragraph 0045).

With respect to claim 8, McDonald discloses the tunable filter element (24) comprises a second resistive element (40) for measuring a tunable parameter of the tunable filter element (see paragraph 0045).

With respect to claims 9 and 10, McDonald discloses a detector coupled to measure a tunable characteristic of the light, which is wavelength of the light (see McDonald, claim 54 and paragraph 0012).

With respect to claim 12, McDonald discloses a support (104) disposed between the first filter element (24) and the second filter element (26) (see fig. 8).

With respect to claim 13, McDonald discloses: a gain medium (12); a laser cavity (124) for receiving a light from the gain medium; and a filter apparatus (152) disposed to receive the light (16), the filter apparatus and the laser cavity defining a reference axis (22), the filter apparatus having a first angular sensitivity to the reference axis and a second angular sensitivity to the reference axis that substantially cancels the first angular sensitivity (see fig. 12A).

With respect to claims 14 and 15, McDonald discloses the filter apparatus (152) as being internal or external disposed with the laser cavity (see paragraph 0064).

With respect to claim 17, McDonald discloses that the filter apparatus is a temperature tuning apparatus (see paragraph 0070).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3-5, and 16 are rejected under 35 U.S.C. 102(e) as being unpatentable over McDonald et al. (US pub. 2002/0172239).

With respect to claims 3-5, and 16, McDonald discloses two angular tuning filters (24 and 26), which are etalons element having multiple angle sensitivities to the reference axis (22) to the light (see paragraph 0088) (see fig. 1). McDonald fails to specifically disclose the etalons' angles as being negative, positive, equal, opposite, and acute. However, It would have been obvious to one of ordinary skill in the art at the time the invention was made to tune the etalons to any of the positions disclosed above to allow tuning of the etalons' joint transmission peak within the joint free spectral range defined by the etalons (see McDonald, paragraph 0088).

Claim 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over McDonald et al. (US pub. 2002/0172239) in view of Green et al. (US pub. 2002/0126345).

With respect to claims 18 and 19, McDonald discloses two angular tuning filters (24 and 26), which are etalons element having multiple angle sensitivities to the reference axis (22) to the light (see paragraphs 0041, 0042, and 0088) (see fig. 1). McDonald fail to specifically discloses a receiver and a transmitter as being part of the device. However, a receiver and transmitter disclose together in a wavelength reference filter apparatus for a laser source is well taught by Green (see paragraph 0028). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a transmitter in the apparatus to emit light from the anti-reflection coated facet the gain medium along the optical path and a receiver to receive data from the rear facet of the gain medium, as indicated by McDonald (see paragraph 0108).

With respect to claim 20, McDonald and Green discloses everything as claimed above. In addition, McDonald discloses that the filter apparatus is tunable (see paragraph 0042).

### **Conclusion**

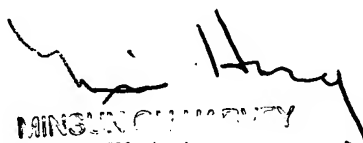
The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

McDonald et al. (US pug. 2002/0016707) disclose a two angular tuning etalon elements having multiple angle sensitivities to the reference axis without specifically disclosing a receiver and a transmitter as being part of the apparatus.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ernest Unelus whose telephone number is 571-272-8596. The examiner can normally be reached on 9:00am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Minsun Harvey can be reached on 571-272-1835. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



ERNEST UNELUS  
PATENT EXAMINER

E.U